

Abstract:

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The Title of diploma thesis: Use of core-shell columns in the Analysis of Drugs I

The aim of this thesis was to find suitable conditions for HPLC analysis of fenbendazole and its metabolite oxfendazole and to search a suitable internal standard.

Several types of columns, mobile phase compositions and temperatures were examined in the thesis. Ascentis® Express F5 10 cm x 3,0 mm, 2,7µm column was proved to be suitable. The mobile phase composition was formic acid 0,03 mol/l and acetonitrile, and it was necessary to set a gradient elution due to significantly different lipophilicities of analytes. The increase of column temperature to 50°C improved the shape of chromatographic peaks.

I managed to choose suitable internal standard - reduced flubendazole.

The new method has been successfully tested in the analysis of the real biological samples.